

What is claimed is:

1. A method for collapsing microbubbles, characterized in that, in the step of microbubbles floated in a solution decreasing gradually by natural dissolution of the gas contained in the microbubbles and disappearing finally, the microbubbles are disappeared by accelerating the speed of the microbubble size decrease by applying a stimulation to the microbubbles.

2. The method according to Claim 1, wherein the microbubbles form an ultrahigh-pressure ultrahigh-temperature region inside in an adiabatic compression-like change of the microbubbles caused by decrease of the microbubbles size.

3. The method according to Claim 1, wherein the electric charge density at the interface of said microbubbles increases rapidly.

4. The method according to Claim 1, wherein free radical species such as active oxygen species for decomposition of the substances present inside the microbubbles or in the area surrounding the microbubbles are generated by collapsing the microbubbles.

5. The method according to Claim 1, wherein the method gives rise to a compositional change of the chemical substances dissolved or floated in the solution.

6. The method according to Claim 1, wherein the method sterilizes microorganisms such as microbes, viruses, and others present in the solution.

7. The method according to Claim 1, wherein the stimulation is electric discharge in a container containing a microbubble-containing solution generated by using a discharger.

8. The method according to Claim 1, wherein the stimulation is ultrasonic wave irradiated into a container containing a microbubble-containing solution by an ultrasonicator.

9. The method according to Claim 8, wherein the ultrasonicator is connected to the container between a microbubble-containing solution outlet port of a microbubble generator connected to the container and an intake of the microbubble generator and the stimulation is given by continuous irradiation of ultrasonic wave into the container by the ultrasonicator.

10. The method according to Claim 1, wherein, when a circulation pipe is connected to a container containing a microbubble-containing solution, said stimulation is compression, expansion and swirling current generated by

circulating part of the microbubble-containing solution in the container by the circulation pump and making the solution path through an orifice or porous plate having a single or multiple holes installed in the circulation pipe.

11. The method according to Claim 10, wherein the circulation pump gives a positive pressure of 0.1 MPa or more to the discharge side.

12. The method according to Claim 10, wherein the circulation pump gives a negative pressure lower than the environmental pressure to the intake side.

13. The method according to Claim 1, wherein, when a circulation pipe is connected to the container containing a microbubble-containing solution, the stimulation is compression, expansion and swirling current generated by feeding the microbubble-containing solution in the container into the circulation pipe and making the solution path through an orifice or porous plate having a single or multiple holes installed in the circulation pipe.

14. The method according to Claim 1, wherein the stimulation is forcibly internal circulation, in the pipe for feeding the microbubble-containing solution generated by a microbubble generator to a container, of making the

microbubble-containing solution discharged from the microbubble generator pass through a punching plate installed in the pipe, taken in part of the microbubble-containing solution from an intake installed between the punching plate and the container and feeding it into a pump, feeding the microbubble-containing solution into the pump, discharging it from an outlet port installed between the microbubble generator and the punching plate, and making it pass through the punching plate once again.

15. The method according to Claim 14, wherein, the pump gives a positive pressure of 0.1 MPa or more to the discharge side.

16. The method according to Claim 14, wherein the pump gives a negative pressure lower than the environmental pressure in the upstream pipe.

17. The method according to Claim 1, wherein, the stimulation is a catalytic reaction generated by allowing an oxidant to react in the presence of a catalyst.

18. The method according to Claim 17, wherein the catalyst is copper and the oxidizer is ozone or hydrogen peroxide.